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“THE WILD FLOWERS OF AMERICA.”

The Greatest Success of the Times.

It's only a few days since the first of the Portfolios of “Wild Flowers of America” was ready for distribution and yet its reception seems already as if the whole nation was singing its praises. From College Presidents, Botanical Professors—teachers of all kinds, Senators, Congressmen, Lawyers, Doctors, Students and the great mass of thinking people, letters of the warmest commendation are pouring in, filling the mails, and constituting at once a demonstration rarely, if ever, approached in the history of popular publications in America. From the mass of letters we publish a few, selecting mostly those of college graduates and others whose actual experience makes them judges of the work they are writing about. We are just as grateful for the letters and telegrams and postal cards from the tens of thousands of young women and young men, whose admiration seems boundless; and may at another time show appreciation of them.

A National Work Receives a National Testimonial.

J. HAVENS RICHARDS, President Georgetown College, West Washington, D. C.:

“The beauty and artistic excellence of the colored drawings are worthy of high praise, * * * and I am confident that by its attraction many young people will be led to undertake and pursue with the greatest pleasure a study which they might otherwise find distasteful.”

J. V. COCKRILL, Congressman, Thirteenth District, Texas, Graduate of Chapel Hill College, Ex-District Judge:

“Is both beautiful and interesting.”

A. C. HARMER, Congressman, Philadelphia, representing Fifth District, Pennsylvania:

“I have carefully examined Mr. Buek's works of the ‘Wild Flowers of America,’ and think them exquisite.”

DAN WAUGH, Congressman Ninth District, Indiana, Ex-Circuit Judge, member Seventh Agricultural Committee, House of Representatives:

“I regard it an excellent work of art, which would be an adornment to any library.”

CHAMP CLARK, Congressman Ninth District, Missouri, Graduate Bethany College, W. Va., Ex-President Marshall College, W. Va.

GEO. W. SMITH, Congressman Twentieth District, Illinois, Graduate McKendree College, Lebanon, Ill.:

“A valuable, beautiful and instructive book, and should be in every school-room in the land.”

E. H. FUNSTON, Congressman, Second District, Kansas, Graduate Marietta College, Ohio, Ex-President State Senate:

“In my judgment, will be a most valuable acquisition to the libraries of those who love the beautiful in nature.”

CHAS. H. MORGAN, Congressman, Fifteenth District, Missouri:

“Deserves and will receive the encomiums from all lovers of the beautiful, and its correctness and completeness make it one of the most valuable contributions to American literature.”



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MARIPOSA LILY, BUTTERFLY TULIP.
CALOCHORTUS VENUSTUS.



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LONG-TUBED RUELLIA.
RUELLIA CILIOSA.
JUNE.

PLATE 161.

MARIPOSA LILY, BUTTERFLY TULIP. CALOCHORTUS VENUSTUS. (LILY FAMILY.)

Smooth perennial; stems erect from a scaly bulb, flexuous, sparingly branched; leaves few, narrow, linear; flowers large, solitary at the ends of the branches; segments of the perianth six, the outer three narrow, green, leaf-like, the three inner broad, concave, with a peculiar glandular, hairy depression near the base.



ON the face of the globe no other area of equal size can show as many strangely fashioned flowers as California. Hers is a vegetation unlike any other in the world, peculiar and almost a thing apart. To behold it is in Chalmers' phrase to feel "the expulsive power of a new affection."

A plant that is always identified with California is the superb Mariposa Lily, *Calochortus venustus*. It is a native of the coast mountains, almost throughout the length of the State. The stem, leaves and bulb are somewhat like those of the onion, but the blossom is unique. The three outer leaves or sepals are green and inconspicuous, but the three large, hollow petals are exceedingly showy. They are usually purple in color, varying from almost white to a deep, rich lilac. The markings are striking and characteristic. Near the summit of the petal is a reddish-purple spot, rather faint in outline. In the centre is a crimson-brown dot, bordered with bright yellow. At the base is a cavity containing a gland, covered with delicate hairs. Altogether there is a striking similarity to the markings on the feathers of a peacock, or rather to the circular spots on the wings of many butterflies. So the name Butterfly Tulip is a very appropriate one; for here, as elsewhere, mimicry in nature crosses the boundaries we set up between her kingdoms, animal and vegetable.

PLATE 162.

LONG-TUBED RUELLIA. RUELLIA CILIOSA. (ACANTHUS FAMILY.)

Perennial; stems rising from a knotted, rather woody root-stock, hairy like the whole plant, much branched; leaves opposite on very short petioles, ovate, obtuse; flowers clustered in the leaf-axils; calyx lobes bristle-pointed; corolla with a long slender tube and spreading, funnel-shaped border.



THE Acanthus is a well-known genus of Old World plants remarkable for the beauty of their foliage. The Greeks admired the form of the leaves and imitated them in art. It is said that the idea of the capital of the graceful Corinthian column, so much used in the later Hellenic architecture, was suggested by a basket of Acanthus leaves on a grave near Corinth. We have many representatives of the family in America, especially in tropical regions. Outside the torrid zone there are comparatively few.

Our showiest genus of this family is *Ruellia*, named by the old French botanist, Plumier, for a compatriot, Jean Ruelle. The flowers are usually purple-blue, occasionally white. They are something like those of the Four-o'clock in shape, long tubed, with a wide border. One southwestern species is night-flowering.

Ruellia ciliosa is a purple-flowered species, common in dry soil in eastern North America, flowering in mid-summer. It runs into many varieties, some of them quite dissimilar in appearance. Like so many other plants, it produces two sorts of flowers, the large showy ones designed for insect cross-fertilization, and the small, apetalous blossoms which are close-fertilized. In case anything happens to the first, the plant is still sure of producing seed.



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ROUGH HEDGE-NETTLE.
STACHYS ASPERA.
JUNE.



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ZYGADENUS
ZYGADENUS GLAUCUS
JULY.

PLATE 163.

ROUGH HEDGE-NETTLE. STACHYS ASPERA. (MINT FAMILY.)

Stem erect, one to three feet high, four angled, angles retrorsely hispid; leaves opposite, short-petioled, ovate, crenate, acutish at apex, rounded at base, pubescent; flowers in whorls in the axils of the uppermost, bract-like leaves; corolla irregular, two-lipped, much exceeding the five-toothed, campanulate calyx.

"Now autumn's fire burns slowly through the woods,
And, day by day, the dead leaves fall and melt,
And, night by night, the monitory blast
Wails in the key-hole, telling how it pass'd
O'er empty fields, or upland solitudes,
Or grim wide wave; and now the power is felt
Of melancholy, tenderer in its moods
Than any joy indulgent summer dealt."—WILLIAM ALLINGHAM



OF all our Hedge-nettles this is, perhaps, the most common. In low, shady, moist woods, or on the banks of brooks, *Stachys aspera* is to be met with late in the season. For it is in August and September, when the leaves of Willow and Button-wood are turning sere and yellow, when locusts and grasshoppers swarm in the parched grass-fields, and the world looks faded and old, that the small pink-purple blossoms of this Hedge-nettle expand—as if to cheer the waning year in its melancholy. It is frequent over a great part of North America, especially in the northern part and southward in the mountains.

It is an odd fact that while plants covered with much soft hair or down are mostly dwellers in dry, sun-exposed places, those that have angled stems, with stiff, bent-back hairs or prickles on the angles are, in the main, marsh-growers. Most of the Bedstraws—the Marsh-bellflower, the Tear-thumb that grows in tangled masses over the low swamp vegetation, well fixed by its prickly holdfasts—go to prove this rule. In the case of all these plants, which have stems too weak to stand erect, yet are not provided with tendrils or rootlets for climbing, the advantage of the contrivance is plain. But why it should benefit stiff, upright plants like the Hedge-nettles to be so furnished, we cannot, as yet, understand.

PLATE 164.

ZYGADENUS. ZYGADENUS GLAUCUS. (LILY FAMILY.)

Smooth; stem erect from a deep, scaly bulb; leaves mostly clustered at the root, long, linear; stem-leaves much smaller, bract-like; flowers on long slender pedicels in a terminal raceme; perianth united with ovary at base, six-parted; segments bearing a large gland at base.



PERHAPS no family is more uniformly distributed in this country than that of the Lilies. Grant Allen, in his "Flowers and their Pedigrees," argues that wheat ranks by descent as a degraded, degenerate lily. If we agree with him, then indeed is the lily's dominion wide and rich. In ornament, as well as use, the lily tribe holds a lofty place among our plants. In the cool shades of the deep forests of the eastern part of the continent, *Clintonia*, the Lily-of-the-valley, *Unifolium*, the Twisted-stalk, the Bellflower, and the *Trilliums* flourish and form a goodly phalanx in the floral beauty of the woods. In the arid, sun-baked deserts of California, Nevada, and Arizona, *Calochortus*, the onion-like *Brodiaëas*, the true onions, the *Yuccas*, and like plants, grow in profusion. The allies of the Lily in the East are often fibrous-rooted, exposing much root-surface to the soil even in winter, for there is always plenty of water in the soil. In the southwest, on the other hand, where the rainy season is very short, and air and earth are as dry as a lime-kiln during the rest of the year, these plants have usually thick, bulb-like roots, which pass the dry season in the soil, their moisture snugly housed by the scaly wrappings.

Zygadenus glaucus grows in Canada and New England, thence west to Minnesota and northward. It is not a showy plant, yet it has elegance of form, withal. The flowers are greenish-yellow. The leaves are long and grass-like.



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 ROCK-ROSE.
HELIANTHEMUM CAROLINIANUM.
 JUNE.



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 SQUIRREL CORN.
DICENTRA CANADENSIS.
 MAY.

PLATE 165.

ROCK-ROSE. HELIANTHEMUM CAROLINIANUM. (ROCK-ROSE FAMILY.)

Stems erect from slender creeping root-stocks, branching, very hairy; root leaves oblong to obovate, stem leaves alternate, short-petioled, elliptical-lanceolate covered with stiff hairs; flowers few, large and showy, with five, obovate, fugacious, yellow petals; stamens very numerous; pod one-celled, many-seeded.



IN its aspect the low country of the Southern States is very peculiar. Almost perfectly flat, the soil, a fine white sand, which the bright summer sun renders excessively disagreeable to the eye, covered with nothing but pine trees, with here and there a swamp where the bald cypress thrives, it is desolate in its monotony. It is a relic of the past, this pine-barren strip along the Atlantic and the Gulf Coast. In its geological horizon it is of the Cretaceous period, the age of gigantic reptiles and great trees of the pine family. The pine and cypress themselves represent a primitive form of life that is on the wane, that must soon follow the uncouth saurians dating from the same era. This strange country hides in its pine forests and sphagnum-covered swamps the most characteristic vegetation in eastern North America, a vegetation least adulterated with Old World types.

A pretty flower of early spring in this part is the Carolina Rock-rose, *Helianthemum carolinianum*. It much resembles its sister, the Frost-weed, but is of humbler growth. The stems are less rigid and the leaves fewer and broader. The flowers are large and handsome, and bright yellow. The petals last but a short time, soon dropping off.

PLATE 166.

SQUIRREL CORN. DICENTRA CANADENSIS. (FUMITORY FAMILY.)

Acaulescent, leaves and scape rising from slender root-stocks which bear small, rounded, yellow, clustered tubers; leaves long-petioled, whitened beneath, ternately much dissected; flowers few, short-pedicelled in a nodding raceme, very irregular; petals four, partly united, forming a heart-shaped corolla two-spurred at base.



AN odd, pretty little plant of our spring woods is the Squirrel Corn, *Dicentra Canadensis*. The leaves and flower-stalk rise from a cluster of small, round, bright-yellow tubers, hence the quaint popular name. The leaves are on separate stalks, very finely divided and whitened on the under surface—delicate leaves, well suiting the dainty flowers. These are very odd, like those of the related species, the Bleeding-heart of the garden, on a small scale. They are heart-shaped, with two spurs projecting in opposite directions at the base, and almost pointed at the apex. They are whitish in color, the tips tinged with purple. The odor is delicate and delightful, with a faint suggestion of that of the Hyacinth. Few perfumes cannot be compared with others. Says Emerson:

“By fate, not option, frugal Nature gave
One scent to hyson and to wall-flower.”

Yet no two odors are exactly alike. Nature is economical, like a clever housewife, who can make two dishes from the same fruit, alike yet different to both eye and palate.

Much like the Squirrel Corn is the quaint Dutchman's Breeches, which has broader flowers, not fragrant, and a scaly bulb instead of clustered tubers.



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 DEER GRASS, MEADOW BEAUTY.
RHEXIA VIRGINICA.
 JULY—AUGUST.



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 POISON IVY, POISON OAK.
RHUS RADICANS.
 JUNE.

PLATE 167.

DEER GRASS, MEADOW BEAUTY. RHEXIA VIRGINICA. (MELASTOMA FAMILY.)

Root thickened; stem branching from near the base, twelve to eighteen inches high, more or less hirsute; leaves opposite, nearly sessile, ovate, acute at both ends, sharply serrate, with three prominent veins; flowers in loose cymes terminating the branches; petals four; stamens eight.



EACHING its great development in the tropics is a family of handsome plants, represented with us by the pretty Rhexias or Deer Grass. They are plants of moist meadows and bogs, mostly along the Atlantic seaboard and in the Southern States that are laved by the Gulf of Mexico. The flowers are large and handsome, pink or purple in most kinds; yellow in a species that grows in the pine-barrens of the South.

Rhexia Virginica is the most common species, growing in grassy, moist ground from Canada southward to Florida, and west to Louisiana and Missouri. The blossoms open in midsummer, lasting but a short time. The four large petals are bright rose-purple in color, well set off by the large, golden-yellow stamens. The veins of the leaves are parallel, at least the larger ones, giving a characteristic appearance to them. The margins are fringed with tiny hairs.

The odd, urn-shaped seed pods are mentioned by Thoreau: "The scarlet leaves and stem of the Rhexia, some time out of flower, make almost as bright a patch now in the meadow as the flowers did. Its seed vessels are perfect little cream pitchers of graceful form."

PLATE 168.

POISON IVY, POISON OAK. RHUS RADICANS. (CASHEW FAMILY.)

Low shrub or woody climber; stems trailing, erect or climbing high; leaves alternate, long-petioled, pinnately trifoliate; leaflets ovate, acute, terminal stalked, lateral nearly sessile, margin entire, sinuate or toothed; flowers in small, axillary, thyrsoid panicles; petals five; stamens as many; fruit, a small drupe.



KNOWN as Poison Ivy when it grows as a climber, and as Poison Oak, especially in the South and West, when it is an upright or creeping shrub, Rhus radicans is one of the commonest and most justly hated of weeds. In spring the young copper-colored, shining leaves are very tempting to the eye, the bunches of white berries in autumn are no less pretty; it is undeniably a handsome plant. Yet for all that we would thankfully see it disappear forever from grove and field and wayside—its beauty is but the allurements of a poisoner. It is because of its venomous properties that we object to this plant, and its still more virulent sister, the Swamp Dog-wood. The cause of its poisonous action on the skin with which it comes in contact was long a mystery. As a rule it is only the most deadly isolated poisons that affect by mere contact. The Poison Ivy holds no fatal alkaloid like those that make belladonna, aconite and nux vomica fatal. The riddle was read when a certain bacterium was found always to accompany this plant. Doubtless it is this tiny organism that enters the pores of the skin and causes the characteristic wart-like swellings by its poisonous excretions.

PLATE 169.

CHOKE-CHERRY. PRUNUS VIRGINIANA. (ROSE FAMILY.)

Shrub or small tree with gray-brown bark; leaves alternate, on long slender petioles, ovate, acute at apex, narrowed or rounded at base, sharply and finely serrate, bright green above, pale beneath; flowers in axillary racemes, small; petals five, white; fruit a small drupe, crimson-red in color.



IT is the Rose Family that furnishes the poetry of diet. The Grass Family, the Pea Family, the Cress Family and others contribute toward the substantial part, but to the family of the Rose we are indebted for many luscious fruits. It is a group of plants very near to us. Many of them have been cultivated the world around since the time "where history blends with the twilight of fable." We love the beauty, the fragrance of these plants. They are not strange and foreign as the Orchids are. We might fill pages with a mere list of the fruits of the Roses that are relished as food. Suffice it to mention the almond, peach, apricot, strawberry, blackberry, raspberry, apple, pear, quince, plum and cherry.

To stop with the last—our native cherries are not good to eat as those we have brought from Europe. The Wild Black Cherry has the pleasantest flavor, yet the fruit is a trifle bitter. It is too small and has too large a stone to be of much value. The Wild Red Cherry has a sour, disagreeable taste. How unpopular the Choke-cherry is, the name forcibly evidences.

Prunus Virginiana is found throughout eastern North America, except in the extreme North and the low country of the South.

PLATE 170.

PRAIRIE CLOVER. KUHNISTERA (PETALOSTEMON) VIOLACEA. (PEA FAMILY.)

Stem erect from a stout perennial root, almost smooth, branching, leafy, spotted with dark-colored glands; leaves also glandular, odd-pinnate, leaflets very narrow, five; flowers in dense capitate spikes; calyx, five-toothed; petals, except the standard which is attached to the calyx, borne on the stamen tube, rose-color.

"Flowers that with one scarlet gleam
Cover a hundred leagues, and seem
To set the hills on fire."



ONLY of this great wide country could Wordsworth have thought as he wrote those lines. They would ill-fit the neatly framed English landscape, unless, perchance, the heath-covered mountains of North Britain were meant. The poet tells us in a note that he has in mind a flower of the hilly country of the South. What it is would be an interesting puzzle, for the mountains of the South are too heavily wooded to be "set on fire" by any flower not borne on a tree. But it would be a happy picture of our broad prairies, where flowers of every color form a single variegated carpet over hundreds of square miles of plain-country. Of these none are more showy in mass or beautiful individually than the Prairie Clovers. Like most brilliant flowers, the leafage is subordinated to the blossom. It is the upright spikes of crimson corollas that make the *Kuhnistera violacea* so handsome a plant. The spike lasts long. As we usually find it, there are withered blossoms below, and green unopened flowers at the top, with a circle of newly-opened flowers between.



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CHOKE-CHERRY.
PRUNUS VIRGINIANA.
 MAY.



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PRAIRIE CLOVER.
KUHNISTERA (PETALOSTEMON) VIOLACEA.
 JULY.

PLATE 171.

SEA-PINK. SABBATIA CHLOROIDES. (GENTIAN FAMILY.)

Whole plant smooth; stem erect, strict or sparingly branched, leafy below; root leaves spatulate, petioled; stem leaves linear-lanceolate, sessile, the upper reduced to bracts; flowers large, terminating the branches; corolla-lobes usually ten, separate almost to the base, spatulate, mucronate, much longer than the narrow calyx-lobes.

The sweet-briar rose has not a form more fair,
Nor are its hues more beauteous than thine own,
Sabbatia, flower most beautiful and rare!
In lonely spots blooming unseen, unknown.
So spiritual thy look, thy stem so light,
Thou seemest not from the dark earth to grow;
But to belong to heavenly regions bright,

Where night comes not, nor blasts of winter blow.
To me thou art a pure, ideal flower,
So delicate that mortal touch might mar;
Not born, like other flowers, of sun and shower,
But wandering from thy native home afar
To lead our thoughts to some serener clime,
Beyond the shadows and the storms of time.

JONES VERY.



ABBATIA chloroides is a gloriously handsome plant, more handsome even than its congener, Sabbatia stellaris. Along the Atlantic and down by the Gulf Coast as far as Alabama, it is first among the "pleasant flowers" that border the "fair face of water weeds" turned to the sky by the salt-marsh ponds.

The leaves do not attract attention. They are severely simple in their elegance and grace, an effective foil to the superb flowers, as plain gold sets off most advantageously the brightest gems. How may we describe those flowers? We may speak of sepals and stamens, but how convey an idea of the exquisite color and form except by pencil and brush. The petals, usually ten in number, sometimes only eight, occasionally twelve, are of a deep rose color, the hue of the sky,

"As morning drinks the morning star,"

ere the sun has flooded it with his glare of work-a-day yellow. In the centre of the flower-cup is a dainty star of a clear yellow-green color. It is again a color of the heavens, the rare tint sometimes observed in cloud-land just after the sun has gone down. We generally look upon the blue flowers as reflecting the color of the heavens, but why not give the pink, the white, the yellow, some small share in the honor?

PLATE 172.

SHOWY ORCHIS. ORCHIS SPECTABILIS. (ORCHIS FAMILY.)

Plant perfectly smooth, fleshy; roots fibrous, thickened, clustered; stem bearing two leaves at base and a terminal bracted, few-flowered racemes; leaves broadly obovate, obtuse at apex, tapering toward the sheathing base; flower irregular, ringent, upper lip hood-shaped, lilac-purple; lower lip spreading, white.



AMONG all the beautiful members of the genus Orchis which gives its name to the most wonderful of plant families, Linnæus chose our little species to bear the name *Spectabilis*. The choice has been criticised. Doubtless this Orchis should have been called *Pulchra*—beautiful—rather than *Spectabilis*—showy.

A truly lovely plant is this quaint denizen of rich woods. The cluster of a few large flowers peeps out coyly above the bright green, juicy-looking twin leaves. The blossom is two-lipped, the upper part shaped like a helmet, light purple; the lower lip pure white, open. Orchis spectabilis blossoms in May or in June. Rather a rare plant it is, for, though widely distributed, one does not find much of it in any one place. It grows in the mountains of Georgia, and from there northward to Canada, and beyond the Mississippi. It is usually met with in low woods, but often ventures up on hillsides. It loves to nestle beside some decaying log, feeding on the rich soil formed there.

Orchis is the "belle" among flowers. Surely we would call her so, without the aid of any "language of flowers." She is not a flaunting belle, but one whose beauty is enhanced by not being paraded.



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SEA-PINK.
SABBATIA CHLOROIDES.
JUNE—AUGUST.



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SHOWY ORCHIS.
ORCHIS SPECTABILIS.
MAY.

PLATE 173.

CANADA ROCK ROSE. HELIANTHEMUM CANADENSE. (ROCK ROSE FAMILY.)

Stems clustered, branching, very leafy; leaves alternate, from elliptical to oblanceolate, densely pubescent, especially beneath; earlier flowers solitary, with five large petals, usually infertile, with numerous stamens; later flowers smaller, often apetalous, in few-flowered, axillary clusters, mostly fertile, with comparatively few stamens.



CERTAIN herbaceous plants exhibit a curious phenomenon in the late fall. If we examine a Scarlet-sage, the *Salvia coccinea* so popular in cultivation, the morning after the first frost, we shall find the bark cracked near the base of the stem, and crystals of ice protruding. It is that horror of cold weather, the bursting of water-pipes, mimicked in the plant world. The pressure of the sap within the stem has split the bark and, as it flows out, it is frozen in tiny icicles. The Canada Rock-rose is a familiar example of the same resistless force. It is often known as Frost-weed on this account.

Helianthemum canadense is a plant of dry sandy soil, or sandstone rocks, common in eastern North America. It flowers in summer. It is a rather stiff plant, with slender rigid stems and narrow leaves. It is completely clothed with fine hoary hairs. The odd thing about it is that it produces two kinds of flowers. The earlier ones are large, with showy, bright yellow petals and many stamens. These are more ornamental than useful, not often producing seeds. The later ones are small in clusters, often without petals and usually fertile.

PLATE 174.

DUTCHMAN'S PIPE. ARISTOLOCHIA SIPHO. (BIRTHWORT FAMILY.)

Root-stock long, creeping, thickened; stem woody, climbing high; leaves alternate, broadly ovate or almost orbicular, cordate, short-pointed or obtuse at apex, pale beneath; flowers solitary on axillary pedicels with a large leaf-like bract; corolla wanting; calyx tube narrow, bent in the middle, limb flat, spreading.



AME Nature likes to unbend her dignity and disport herself occasionally—perpetrating oddities in her world of flowers—floral-freaks. Such are the blossoms of most of the Birthwort Family, to which our quaint Wild Ginger belongs. Some of the tropical *Aristolochias* have flowers of enormous, almost grotesque size.

As the North excels in beautiful herbaceous wood-dwelling plants, the South is remarkable for the number and showiness of woody-climbers, in the same way that air-plants reach so great development in the tropics—

“Whose habitations in the tree-top even
Are half-way houses on the road to Heaven.”

Plants to thrive must grow up out of the tangled, sunless jungle. Even as far north as the Southern States, air-plants appear and high climbers are numerous.

The Dutchman's Pipe is a plant of the Appalachian region, ranging from Canada southward, but is most abundant in the mountains of the Virginias and southward. Its woody twining stems ascend trees or even the faces of cliffs to the height of thirty feet or more. The leaves are handsome, round, heart-shaped. But the remarkable flower catches our attention first. It is bent in the middle, and has some faint resemblance to a small pipe's bowl and tube. The tube is pale yellow, streaked and spotted with dark purple. The limb is almost black.



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CANADA ROCK-ROSE.
HELIANTHEMUM CANADENSE.
JUNE—AUGUST.



— 174 —
DUTCHMAN'S PIPE.
ARISTOLOCHIA SIPHO.
MAY—JULY.

PLATE 175.

FALSE VIOLET. RUBUS DALIBARDA. (DALIBARDA REPENS.) (ROSE FAMILY.)

Acaulescent, leaves and flower-stalks rising from slender, creeping root-stocks, pubescent; leaves long-petioled, broadly ovate to orbicular, cordate, obtuse at apex, crenate; flowers on long slender peduncles; calyx usually five-cleft; petals five, white; stamens numerous; fruit consisting of a number of dry, one-seeded drupes.



DIFFERENT plants, distinct as to their families, resemble each other remarkably, affording good illustrations of what Darwin calls "parallel variation," that is of two organisms descending from separate ancestors, but approaching each other in character. The Goat-beard—a large herb of the Rose Family, with a huge cluster of small white flowers—has almost its double in the genus Astilbe of the Saxifrage Family. Leaves, flowers, and fruit, and even having the stamens and pistils on separate plants are alike in both.

In Dalibarda we have a plant of the genus which contains the Blackberry and Raspberry, resembling a stemless, round-leaved Violet. So great is the resemblance that Michaux, the fine old French botanist and voyageur, christened it "Dalibarda Violæoides." It is a plant of Canada and the Northern States, common northward, but not growing further to the south than the mountains of Pennsylvania. It loves to grow in cool, mossy woods, opening its one or two small white flowers in early summer. Even the blossoms are not unsuggestive of those of a white-flowered Violet, while the round, heart-shaped leaves and creeping stems remind us strongly of some of the Violets. It is certainly not much like other species of Rubus, and many have considered it distinct from them.

PLATE 176.

TALL SWAMP-THISTLE. CARDUUS (CNICUS) MUTICUS. (SUNFLOWER FAMILY.)

Stem sometimes eight feet high from a thickened root-stock, angled and striate, leafy; leaves alternate, pinnatifid, segments linear, toothed, spine-tipped; heads few, large; bell-shaped involucre of many imbricated, barely pointed, arachnoid hairy bracts; flowers purple; corollas all tubular; pappus a tuft of white hairs.



RETALIATION is the proverbial idea in connection with the Scotch Thistle. Why should it not apply to all these sturdy herbs, kind to friends, but quick to repel foes? Deal gently with the Thistle, and you need fear it not. Handle it roughly, and it is not slow to give you proof of its power to defend itself.

The thistles, with their soft, juicy stems and leaves, would be victims of every herbivorous animal had they not found how to protect themselves by means of their outworks of spines and prickles. Yet, as plants acquire new means of defense, animals learn to adapt themselves to the changes. Master Donkey has toughened the skin of his tongue and throat, so that the wickedest Thistle is a toothsome morsel to him. They are provident, self-sufficient plants, these thistles. Not only are they well armed, but they have a clever contrivance for spreading themselves over the fields. Their light, plumed seeds are caught up by the lightest breeze, and sail away in search of new homes,

"Maugre the farmer's sighs."

Carduus muticus is a plant of bogs, especially in the northern part of this country. It is a tall Thistle, one of the highest.



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 FALSE VIOLET.
RUBUS DALIBARDA (REPENS).
 JUNE.



— 176 —
 TALL SWAMP-THISTLE.
CARDUUS (CNICUS) MUTICUS.
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